

Serial No. 10/766,321

Attorney Docket No. 14-025

LISTING OF CLAIMS:

1. (Currently amended) An instantaneous wire interruption detection system for an electrical system of a vehicle that detects an instantaneous wire interruption that occurs in the electrical system of the vehicle due to a temporary contact failure, comprising:

a signal abnormality detection portion for detecting a signal abnormality, the signal abnormality being temporarily reproduced when a repair center vibrates a signal wire of the vehicle, to provide a detection result; and

a holding portion for latching the detection result as a latch signal when the signal abnormality detection portion detects the signal abnormality;

an output circuit for outputting the latch signal; and

an external connection unit, ~~for~~ being connected to the output circuit only when the repair center checks for the signal abnormality so as to receive the latch signal, wherein the external connection unit is provided with ~~the a~~ warning device that issues the warning when the signal abnormality is detected.

Claims 2 – 4 (Canceled)

5. (Currently amended) The instantaneous wire interruption detection system for an electrical system of a vehicle according to claim 1, wherein

~~the an~~ electric signal generated by ~~the a~~ signal generation portion is a signal that accords with a determined communication protocol, and

the signal abnormality detection portion, when the signal that accords with the determined communication protocol is being transmitted from the signal generation portion, determines the normal state to be a state in which the signal that accords with the determined communication protocol is being input continuously, and determines the abnormal state to be a state in which the signal that accords with the determined communication protocol is interrupted, despite the fact that the signal generation portion is transmitting the signal that accords with the determined communication protocol.

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6. (Currently amended) The instantaneous wire interruption detection system for an electrical system of a vehicle according to claim 1, wherein
~~the an~~ electric signal generated by ~~the a~~ signal generation portion is a digital pulse signal, and

the signal abnormality detection portion, when the pulse signal is being transmitted from the signal generation portion, determines the normal state to be a state in which the pulse signal is being input continuously at a fixed time interval, and determines the abnormal state to be, one of, a state in which the pulse signal is input at a time interval longer than the fixed time interval, and a state in which the pulse signal is interrupted, despite the fact that the signal generation portion is transmitting the pulse signal.

7. (Currently amended) The instantaneous wire interruption detection system for an electrical system of a vehicle according to claim 1, wherein
~~the an~~ electric signal generated by ~~the a~~ signal generation portion is a digital signal that is maintained at a fixed, ON state signal level, and

the signal abnormality detection portion, when the digital signal is being transmitted from the signal generation portion, determines the normal state to be a state in which the digital signal is being input in the maintained ON state, and determines the abnormal state to be a state in which the digital signal is interrupted, despite the fact that the signal generation portion is transmitting the digital signal.

8. (Currently amended) The instantaneous wire interruption detection system for an electrical system of a vehicle according to claim 1, wherein
~~the an~~ electric signal generated by ~~the a~~ signal generation portion is an analogue signal, and

the signal abnormality detection portion, when the analogue signal is being transmitted from the signal generation portion, determines the normal state to be a state in which the analogue signal is being input continuously, and determines the abnormal state to be a state in which the analogue signal is interrupted, despite the fact that the signal generation portion is transmitting the analogue signal.

Claims 9 – 16 (Canceled)